

**SECTION 2. FORMS PTO/SB/08A and 08B (formerly Form PTO-1449)**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: John A. Geen Attorney Docket: 2550/189  
 Serial No: 10/646,332 Art Group Unit: 2856  
 Date Filed: August 22, 2003 Examiner Name: Kwok, Helen  
 Invention: Micromachined Apparatus Utilizing Box Suspensions

**LIST OF PATENTS AND PUBLICATIONS FOR  
 APPLICANT'S INFORMATION DISCLOSURE STATEMENT**

U.S. PATENT DOCUMENTS					
Examiner Initials	Reference Number	Document Number	Issue Date	Inventor	Class/Subclass
KR	AA	US 2,309,853	Feb. 2, 1943	Lyman et al.	N/A
KR	AB	US 4,381,672	May 3, 1983	O'Connor et al.	73/505
KR	AC	US 4,510,802	April 16, 1985	Peters	73/505
KR	AD	US 4,524,619	June 25, 1985	Staudte	73/505
KR	AE	US 4,598,585	July 8, 1986	Boxenhorn	73/505
KR	AF	US 4,654,663	March 31, 1987	Alsenz et al.	73/517
KR	AG	US 4,744,248	May 17, 1988	Stewart	73/505
KR	AH	US 4,744,249	May 17, 1988	Stewart	73/505
KR	AI	US 4,884,446	Dec. 5, 1989	Ljung	73/505
KR	AJ	US 5,016,072	May 14, 1991	Greiff	357/26
KR	AK	US 5,016,076	May 14, 1991	Darwish	357/38
KR	AL	US 5,025,346	June 18, 1991	Tang et al.	361/283
KR	AM	US 5,056,366	Oct. 15, 1991	Fersht et al.	73/505
KR	AN	US 5,111,693	May 12, 1992	Greiff	73/514
KR	AO	US 5,144,184	Sept. 1, 1992	Greiff	310/312
KR	AP	US 5,195,371	March 23, 1993	Greiff	73/505
KR	AQ	US 5,203,208	April 20, 1993	Bernstein	73/505
KR	AR	US 5,216,490	June 1, 1993	Greiff et al.	73/517
KR	AS	US 5,241,861	Sept. 7, 1993	Hulsing, II	73/505
KR	AT	US 5,259,247	Nov. 9, 1993	Bantien	73/718
KR	AU	US 5,273,939	Dec. 28, 1993	Becker et al.	437/209
KR	AV	US 5,313,835	May 24, 1994	Dunn	73/505
KR	AW	US 5,329,815	July 19, 1994	Dunn et al.	73/505
KR	AX	US 5,341,682	Aug. 30, 1994	Hulsing, II	73/505
KR	AY	US 5,343,749	Sept. 6, 1994	Macy	73/505
KR	AZ	US 5,349,855	Sept. 27, 1994	Bernstein et al.	73/505
KR	BA	US 5,359,893	Nov. 1, 1994	Dunn	73/505
KR	BB	US 5,367,217	Nov. 22, 1994	Norling	310/370
KR	BC	US 5,377,544	Jan. 3, 1995	Dunn	73/505
KR	BD	US 5,392,650	Feb. 28, 1995	O'Brien et al.	73/517

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U.S. PATENT DOCUMENTS					
Examiner Initials	Reference Number	Document Number	Issue Date	Inventor	Class/Subclass
HR	BE	US 5,408,877	April 25, 1995	Greiff et al.	73/505
HR	BF	US 5,481,914	Jan. 9, 1996	Ward	73/504.16
HR	BG	US 5,492,596	Feb. 20, 1996	Cho	156/632.1
HR	BH	US 5,496,436	March 5, 1996	Bernstein et al.	156/628.1
HR	BI	US 5,505,084	April 9, 1996	Greiff et al.	73/504.14
HR	BJ	US 5,511,419	April 30, 1996	Dunn	73/504.08
HR	BK	US 5,515,724	May 14, 1996	Greiff et al.	73/504.12
HR	BL	US 5,530,342	June 25, 1996	Murphy	324/158.1
HR	BM	US 5,535,902	July 16, 1996	Greiff	216/2
HR	BN	US 5,537,872	July 23, 1996	Frere et al.	73/504.12
HR	BO	US 5,555,765	Sept. 17, 1996	Greiff	73/504.09
HR	BP	US 5,581,035	Dec. 3, 1996	Greiff	73/514.32
HR	BQ	US 5,600,064	Feb. 4, 1997	Ward	73/504.04
HR	BR	US 5,604,309	Feb. 18, 1997	Ward	73/504.02
HR	BS	US 5,604,312	Feb. 18, 1997	Lutz	73/504.14
HR	BT	US 5,608,351	March 4, 1997	Ward	330/107
HR	BU	US 5,635,638	June 3, 1997	Geen	73/504.04
HR	BV	US 5,635,639	June 3, 1997	Greiff et al.	73/504.04
HR	BW	US 5,635,640	Jun 3, 1997	Geen	73/504.12
HR	BX	US 5,646,348	July 8, 1997	Greiff et al.	73/514.36
HR	BY	US 5,650,568	July 22, 1997	Greiff et al.	73/504.09
HR	BZ	US 5,672,949	Sept. 30, 1997	Ward	318/609
HR	CA	US 5,696,323	Dec. 9, 1997	Hulsing, II	73/504.12
HR	CB	US 5,717,140	Feb. 10, 1998	Hulsing, II	73/504.16
HR	CC	US 5,734,105	March 31, 1998	Mizukoshi	73/504.02
HR	CD	US 5,747,961	May 5, 1998	Ward et al.	318/646
HR	CE	US 5,763,781	June 9, 1998	Netzer	73/504.16
HR	CF	US 5,767,405	June 16, 1998	Bernstein et al.	73/504.16
HR	CG	US 5,783,973	July 21, 1998	Weinberg et al.	331/35
HR	CH	US 5,795,988	Aug. 18, 1998	Lo et al.	73/1.77
HR	CI	US 5,796,001	Aug. 18, 1998	Greiff et al.	73/504.16
HR	CJ	US 5,869,760	Feb. 9, 1999	Geen	73/504.12
HR	CK	US 5,886,816	March 23, 1999	Faris	359/464
HR	CL	US 5,892,153	April 6, 1999	Weinberg et al.	73/504.16
HR	CM	US 5,895,850	April 20, 1999	Buestgens	73/504.12

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Examiner Initials	Reference Number	Document Number	Issue Date	Inventor	Class/Subclass
HR	CN	US 5,895,851	April 20, 1999	Kano et al.	73/504.04
HR	CO	US 5,911,156	June 8, 1999	Ward et al.	73/504.16
HR	CP	US 5,918,280	June 29, 1999	Gang et al.	73/504.12
HR	CQ	US 5,920,012	July 6, 1999	Pinson	73/504.12
HR	CR	US 5,945,600	Aug. 31, 1999	Touge et al.	73/504.14
HR	CS	US 5,952,572	Sept. 14, 1999	Yamashita et al.	73/504.04
HR	CT	US 5,955,668	Sept. 21, 1999	Hsu et al.	73/504.12
HR	CU	US 5,987,986	Nov. 23, 1999	Wyse et al.	73/504.12
HR	CV	US 5,992,233	Nov. 30, 1999	Clark	73/514.35
HR	CW	US 6,009,751	Jan. 4, 2000	Ljung	73/504.02
HR	CX	US 6,032,531	May 7, 2000	Roszhart	73/504.04
HR	CY	US 6,044,707	April 4, 2000	Kato	73/504.14
HR	CZ	US 6,064,169	May 16, 2000	Ward et al.	318/646
HR	DA	US 6,067,858	May 30, 2000	Clark et al.	73/504.16
HR	DB	US 6,070,463	June 6, 2000	Moriya et al.	73/504.12
HR	DC	US 6,089,089	July 18, 2000	Hsu	73/504.12
HR	DD	US 6,122,961	Sept. 26, 2000	Geen et al.	73/504.12
HR	DE	US 6,128,953	Oct. 10, 2000	Mizukoshi	73/504.02
HR	DF	US 6,155,115	Dec. 5, 2000	Ljung	73/504.12
HR	DG	US 6,164,134	Dec. 26, 2000	Cargille	73/504.02
HR	DH	US 6,189,381	Feb. 20, 2001	Huang et al.	73/504.12
HR	DI	US 6,190,571	Feb. 20, 2001	Kato	216/2
HR	DJ	US 6,250,156	June 26, 2001	Seshia et al.	73/502.12
HR	DK	US 6,250,157	June 26, 2001	Touge	73/504.12
HR	DL	US 6,257,059	July 10, 2001	Weinberg et al.	73/504.16
HR	DM	US 6,289,733	Sept. 18, 2001	Challoner et al.	73/504.12
HR	DN	US 6,311,555	Nov. 6, 2001	McCall et al.	73/488
HR	DO	US 6,321,598	Nov. 27, 2001	Iwaki et al.	73/504.02
HR	DP	US 6,282,960 B1	Sept. 4, 2001	Samuels et al.	73/514.32
HR	DQ	US 5,600,065	Feb. 1997	Kar et al.	73/504.12
HR	DR	US 6,516,666	Feb. 2003	Li, Guang X.	73/504.12
HR	DS	US 6,561,029	May 2003	Folkmer et al.	73/504.14
HR	DT	US 6,860,151	March 1, 2005	Flatt et al.	73/504.16
HR	DU	US 6,767,758	July 27, 2004	Geen	438/48
HR	DV	US 6,230,563	May 15, 2001	Clark, et al.	73/504.04

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h2	DW	US 6,505,511	Jan. 14, 2003	Geen, et al.	73/504.12

U.S. PATENT PUBLICATION DOCUMENTS					
Examiner Initials	Reference Number	Document Number	Publication Date	Inventor	Class/Subclass
h2	DX	US 2003/131664	July 17, 2003	Mochida, et al.	73/504.12
h2	DY	US 2003/005767	Jan. 9, 2003	Hulsing, II	73/514.02
h2	DZ	US 2003/0131669	July 17, 2003	Osawa	73/861.355

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Reference Number	Country Code	Document Number	Publication Date	Patentee or Applicant	Class/Subclass
h2	EA	WO	WO 96/39615	Dec. 12, 1996	Analog Devices, Inc.	G01C 19/56, G01P 15/00
h2	EB	WO	WO 93/05401	March 18, 1993	The Charles Stark Draper Laboratory, Inc.	G01P 9/04
h2	EC	WO	WO 01/79862 A1	Oct. 25, 2001	Microsensors, Inc.	G01P 9/04

OTHER DOCUMENTS			
Examiner Initials	Reference Number	Author	Title of Article, Title of Journal, Volume Number, Page Numbers, Date
h2	ED	Weinberg et al.	<i>A Micromachined Comb-Drive Tuning Fork Rate Gyroscope</i> , Proceedings of the 49 <sup>th</sup> Annual Meeting of the Institute of Navigation, June 21-23, 1993, 7 pages.
h2	EE	Seshia et al.	<i>Integrated Microelectromechanical Resonant Output Gyroscope</i> , updated, online < <a href="http://hera.berkeley.edu/IRO/Summary/olabstracts/aseshia.1.html">http://hera.berkeley.edu/IRO/Summary/olabstracts/aseshia.1.html</a> >, printed February 6, 2002, 2 pages.

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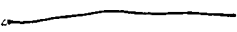
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KZ	EF	Geen et al.	<i>Single-Chip Surface Micromachined Integrated Gyroscope with 50°/h Allan Deviation</i> , IEEE Journal of Solid-State Circuits, Vol. 37, No. 12, December 2002, 7 pages.
	EG		<i>A Comb-drive Piezoresistive Vibratory Gyroscope</i> , online < <a href="http://mems.stanford.edu/~lian/gyro.html">http://mems.stanford.edu/~lian/gyro.html</a> >, printed February 6, 2002, 4 pages.
KZ	EH	Authorized Officer Mildred Condron	<i>International Search Report and The Written Opinion of the International Searching Authority</i> , International Searching Authority, December 22, 2004, 13 pages.

Examiner Signature:

Helen Kwok

Date Considered:

11/8/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation *if not* in conformance and not considered. Include copy of this form with next communication to applicant.